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## Agricultural.

### REGISTERING SHORTHORNS.

RAY PORT, HURON CO., NOV. 28, 1887.

To the Editor of the Michigan Farmer.

Being a subscriber to your paper I thought you would have no objections to giving me some information through its columns about Shorthorn registration. Some of my neighbors have Shorthorn Herds that are recorded in the Dominion Herd Book. The breeder's name is Henry Wade, I think. They are not recorded in the American Herd Book. Are they eligible for the American Herd Book, if they are not recorded in the English Herd Book? We had some dispute at our fairs this fall in the registered Shorthorn class. These parties claim that the Dominion Herd Book stands higher than the American Herd Book. Please give me what information you can in the matter. How do they do it in the States? Must all Shorthorn cattle be recorded in the American Herd Book to be eligible for competition? Now, I claim that when we are in America we will do as the Americans do, and when we are in Canada we will do as the Canadians do, and if these cattle are eligible for the American Herd Book, let them record them there or show in the grade class. This information will be a benefit to the young breeders like myself.

YOUNG BREEDER.

To your first query we answer that the registry or non-registry of an animal in the Dominion Shorthorn Herd Book can have no influence upon the eligibility of the animal to registry in the American Herd Book. The rule that governs in determining whether an animal is eligible to registry or not is as follows:

Pedigrees shall give the name, color, sex, date of birth, name and address of breeder and owner, name and herd book number of sire or his pedigree, name and pedigree of dam, with volume of her record in one of the herd books of the association, or of the English Herd Book. The animal must trace on the side of the sire and dam to recorded imported English Shorthorns, or to pedigrees not false or spurious, already of record.

The Dominion Herd Book has no standing in this country, and in purchasing Shorthorns Americans should always stipulate that they be registered in the American Herd Book, or trace direct to animals registered in it or in the English Herd Book.

To your second query we answer that at the State Fair only Shorthorns recorded in the American or English Herd Books, or whose sires and dams are so recorded, are entitled to compete in the thoroughbred classes, and this should be so at all fairs in the United States.

To the Dominion Herd Book, it is as yet a recent affair, started to take the place of the Canadian Herd Book, which had become so unreliable that parties on this side of the line finally refused to recognize it in any way. We hope the Dominion Herd Book, if continued, will obtain a better reputation among breeders.

Annual Meeting of the Michigan Short-horn Breeders' Association.

LAPEER, NOV. 30, 1887.

To the Editor of the Michigan Farmer.

In the programme of the Shorthorn Cattle Breeders' Meeting published in the FARMER, the name of Mr. Wm. Ball has in some way been omitted. It should read, "What Families or Class of Shorthorns Promise best Profits for Breeding," Wm. Ball, Hamtramck.

Since sending copy of programme I have notice of an additional paper by Mr. W. E. Hale, of Eaton Rapids, "Some of the Difficulties to be Overcome by a Beginner," a subject that must prove interesting to a large number of the breeders who will this year attend.

President Johnson suggests as an additional topic, "The Value of Enslage as Cattle Food."

From letters received I feel certain that a very large number of the Shorthorn breeders of the State will be in attendance.

L. H. BUTTERFIELD, Sec'y.

### REGULATING BREEDING BY LAW.

### THE AGRICULTURAL COLLEGE OF MICHIGAN.

In the last issue of the *National Stockman* a correspondent has an article on this subject which contains some good suggestions—and some not so good. He says:

"But I think the enterprise and education of our people has reached that plane that such a law could be enforced and put into successful practice. Many other countries are reaping large profits to-day by selling the fine animals that the laws and country ascertain as those to be bred and raised. I believe that the farmers prefer to vote for the fine-haired class lawyers, doctors, etc., to enable them to join our law-making bodies, and the result we seldom get any enactments that favor us as a class in the least. This is about as foolish an act as we could be guilty of. It would be safer and better to select representatives from our own number, their interest being identical with ours. We would doubtless be thought of before the next election."

The present bulletin gives the results for the seven months ending Oct. 10, 1887.

"I would favor a law requiring all to breed to registered thoroughbred or standard-bred stock, and to have all owners of such stock required to allow the use of their services at a uniform price, which should not be extravagant—say \$10 for a horse and \$5 for cattle; and let this be a lien against the produce until paid, no matter whose hands they may fall in. I know of the best men in the country, better very much, who used on account of slight fees. This looks to be a great loss to the breeding world. They should not idle away their time in this way. Some breeders of cattle in their advertisements offer the services of their favorite bull for \$1,000 each, others, a little more considerate, at \$500; and down to \$100. This I believe to be downright extortion; it means what it states; if not it is at least hypocritical, and is not without bad effects on the great breeding interest. I would also require that the fees be well in the interest of all concerned, and that would utilize in the best possible manner all the thoroughbred sires we have, and it appears to me there is enough to do so in this part, and that would have all the male grades castrated at an early age, with penalty attached for use of such for breeding purposes, etc."

This suggestion regarding the use of thoroughbred males is in the right direction, and would undoubtedly be of much general benefit to the live stock of the country. But when he stipulates that this law shall also place a value upon their services and compel owners to accept a certain price, he is favoring something which would be directly opposed to improved breeding. How many men would put from \$1,000 to \$3,000 in a sire if they were restricted by law to a \$10 fee? Would not the result be that second rate sires (the fee would be about right for third rate), would drive out the better ones, and what would be gained by compelling owners to breed to thoroughbred sires would be lost by forcing out valuable ones by this low fee, and fixing their places with the poorest specimens which would pass muster under the regulations adopted? Such a statute would be an effectual bar to enterprise and progress in breeding. How would the owner of a George Wilkes, an Electioneer, a Sultan or a Nutwood regard such a law? Would the history of the running turf be filled with Lexingtons, Leamingtons, Ten Brocks, Longfellow, Foxhalls and Ormondes under such regulations?

The sensible way to accomplish the improvement of live stock is for the government to foster enterprise, not to crush it. Protect the owners of well bred animals from the competition of worthless scurbs which are pained off on farmers and horse owners—well-bred and under fictitious pedigrees. We think such statutes as the one now in force in this State will accomplish more for the stock interest than the one suggested by this correspondent. It is as follows:

A bill to punish persons guilty of false pretenses in obtaining certificates of registration of cattle and other animals, and to punish giving false pedigree.

SECTION 1. *The people of the State of Michigan do enact as follows:* Every person who by any false pretense shall obtain from any club, association, society or company for improving the breed of cattle, horses, sheep, swine or other domestic animals, a certificate of registration of any animal, and who has not been a member of such club, association, society or company, or a transfer of any such registration, and every person who shall knowingly give a false pedigree of any animal, upon conviction thereof, shall be punished by imprisonment in the State prison for a term not exceeding three years, or in a county jail not exceeding one year, or by a fine not exceeding one thousand dollars, or by both such fine and imprisonment in the discretion of the court.

This law is designed to prevent fraud, and this is a protection to owners of thoroughbred animals, as well as to the farmer who desires to use them. If you want to breed to scrub the law allows you to do so, and the loss is your own. But it prevents the owner of the scrub from deceiving any one, and thus directly encourages the breeding and use of well bred animals. Such a law should be in every State.

A BOHEMIAN oats suit was tried in Flint last week which attracted a good deal of interest among farmers in that vicinity. A. W. Hammer, representing the Ypsilanti Oat Company, sold Abram Pittsworth, of Atlas, twenty bushels of Bohemian oats in August, 1885, and guaranteed to take forty bushels of the next year's harvest at a stipulated price. He represented, Mr. Pittsworth claims, that his company had \$100,000 deposited with the State Treasurer at Lansing, and was sound in every particular. Mr. Pittsworth recently filed a suit in the Genesee circuit court, charging that Hammer had obtained his signature to the note in payment for the twenty bushels of oats by false representations. The jury found Hammer guilty as charged, and he says he will appeal the case to the Supreme Court.

It is our intention to continue the feeding of these steers for another year, when the final results may be compared. Copies of this bulletin and No. 24 will be mailed to interested parties on application to the undersigned.

SAM'L JOHNSON,  
Prof. of Agriculture.

FARM DEPARTMENT  
AGRICULTURAL COLLEGE, NOV. 1, 1887.



John L. Hayes

### MEMOIR OF HON. JOHN LORD HAYES, LL. D.

BY GILES B. STEBBINS, DETROIT, MICH.

JOHN L. HAYES passed to the higher life from his home in Cambridge, Massachusetts, on Monday, April 18, 1887, after a weary illness of several months. The change "was like the stepping of a watch," as one of the family said. After a long life of unusual health and vigor his body yielded to disease. At the last moment his daughters said "his face was irradiated."

Born in South Berwick, Maine, April 13, 1812, he had just passed his seventy-fifth year. The fact that he was the eldest of thirteen children, of whom six sons and as many daughters reached adult years and six are still in active life, shows the heritage of sound physical health. His father, William A. Hayes, was an eminent lawyer and a man of signal probity and fine culture. He was probate judge for years, and lived on a great farm, the model farm of Maine. In 1850 John Hayes, "The Puritan," as his tombstone says, emigrated from Scotland, and was the ancestor of a strong race.

Susannah Lord, the mother of John L. Hayes, a woman of deep poetic feeling and religious sense of duty, traced her lineage back to Nathan Lord, of Kittery, Maine, in 1650, whose descendants did good duty to State and college. Rev. John Lord, LL. D., the eminent historical lecturer, is one of the best known New Englanders.

In 1851 he moved his family to Washington, the former importance of Portsmouth growing less, and held a leading place as a lawyer and in the real estate life of the national capital for ten years. As the coming storm of civil war filled the air with perturbation he held firm to the Union side, and was one of the marshals who rode beside the carriage of Abraham Lincoln at his first inauguration. Mr. Hayes held his opinions on all subjects with unwavering firmness, but never needlessly obstructed them, and had the abiding confidence and friendship of many who differed from him.

In May, 1861, he was made Chief Clerk of the Patent Office, (its chief executive officer,) and often acted as Commissioner in the absence of that official, making many reports and decisions of marked legal ability, and doing his duty well and thoroughly. He made a report in favor of extending the patent on the Bigelow carpet loom, an invention which cheapened the cost and added to the real value of our carpets, and this led to an acquaintance with the late E. B. Bigelow, and to his going to Boston, in 1865, as Secretary of the National Association of Wool Manufacturers, taking part and perhaps giving facts and advice. Both these gentlemen won the confidence of all, and their services were highly appreciated. The result was the wool tariff of 1867, which was undisturbed until 1883, but held advantages to both the wool and woollen industries, and helped greatly to put aside all old jealousies and bring in their place the mutual confidence and good will which is largely felt between the growers of wool and the makers of woollen fabrics who favor protective duties for both. These conferences made Mr. Hayes known and respected by wool growers in all parts of the country, and it is well understood that he did much to make them useful and successful. He had a large part in the framing of the wool and woollen tariff at that time and in its passage by Congress.

### TWENTY YEARS OF IMPORTANT WORK.

Here he found his place and his work. That place he had and that he carried on with undaunting industry and courage for more than twenty years. Early life on the farm gave knowledge of the flock, and natural skill in mechanism and love of practical science gave knowledge of the loom. He could see the close relations and common interests of the woolen manufacturers and the wool grower. Experience and intercourse among farmers, manufacturers, business men, and workingmen led him to see the real unity of interests linking each to all and to each, and to see also the benefit of varied industry as a help to higher civilization. In his long advocacy of the protective policy he never sought to build up one industry at the expense of another.

All the valuable work of previous years served to help in this chosen field. The problem was to know all possible of the manufacture of wool and of sheep husbandry the world over. To know of markets and costs as well as of processes of making cloth and raising wool. Who has so well mastered this problem? The *Bulletin* which he edited, the organ of the Association of Naturalists and Geologists, the Boston Society of Natural History, the American Academy of Arts and Sciences, the New England Historical Genealogical Society, and the Societe d'Acclimatation of France, and in 1878 Dartmouth College made its learned and diligent graduate an LL. D. In politics he took part so far as duty seemed to require it; was chairman of the Democratic Club in 1840, and in 1845 helped as a pioneer to organize the Free Soil movement.

Mr. Hayes was appointed clerk of the United States courts for the District of New Hampshire by the distinguished Judge Story, with whom he had formed intimate relations while at the Law School. He was a member of the American Association of Naturalists and Geologists, the Boston Society of Natural History, the American Academy of Arts and Sciences, the New England Historical Genealogical Society, and the Societe d'Acclimatation of France, and in 1878 Dartmouth College made its learned and diligent graduate an LL. D. In politics he took part so far as duty seemed to require it; was chairman of the Democratic Club in 1840, and in 1845 helped as a pioneer to organize the Free Soil movement.

In 1846 came a change, unfortunate yet fortunate—the adversity of to-day opening the way for the life work to begin to-morrow. Some Portsmouth citizens took an interest in the Katahdin Iron Works, far up in the forests of Maine, sixty miles from Bangor, and made Mr. Hayes the general manager, his practical scientific tastes and persistent industry leading him to take up the task with great zeal, and to make it a successful enterprise in charcoal iron manufacture. But soon came the British free trade tariff of 1846, the deluge of English iron pushed over here at cost or below the closing up of our mills and fur-

of statement and candid weight of opinion won respectful confidence, so that those who inclined toward free trade, as well as those who favored protection, were glad to meet him. \* \* \* \* \*

The annual report of Mr. Hayes, as Secretary of the National Association of Wool Manufacturers, at their twenty-second annual meeting, at Boston, in October, 1856, was his last official paper but one. It shows throughout an undiminished excellence of thought and style. To those, if any such there be, who suppose that corrupt means are used by associations like this to gain protective legislation, or reduce the wages of labor, or to monopolize products, his plain statements are especially commendable. What he says is as true, I think, of the American Iron and Steel Association as it is of the body which he served and helped so long and so well. Such schemes and measures are as foreign to the objects of the one as the other. His report closes as follows:

"If we have not done those things which we ought to have done I think we have a right to say that we have not done those things which we ought not to have done. I can not recall a single act of this Association which I would blush to lay open to the world. In the most critical emergencies of legislation not a single dollar has been spent directly or indirectly to secure a vote or to influence the press or lobby. Not a single movement ever made in my memory has the prices of labor to resist labor organizations, or to curtail production. No combination has been permitted to oppose obnoxious patents or diminish the prices or protection of auxiliary industries furnishing machinery supplies or raw materials. Even in the movement to restore the wool duties not a letter was written from our office, nor was any personal influence, with the sanction of the Association, brought to bear upon members of Congress to counteract the movement. Not a cent of the funds of the Association has ever been expended for convivial purposes or social influences, nor a dollar appropriated to a political organization or for a political object. These are mere negative virtues, but the consciousness that we may rightfully claim them gives us the satisfaction of feeling that if we have not exalted at least we have not tarnished the fair fame of American industry."

### AD INWOOL TARIFF OF 1867.

Up to 1857 there had been a want of fair understanding between wool growers and manufacturers, while the intelligent and large-minded on both sides saw that their interests were so interdependent as to be really one, since either was directly helped by the prosperity and hurt by the adversity of the other. The wool grower's only market is at home, and the larger our home manufacture the larger and better is that market. The manufacturer is better off with a good supply of domestic wool than when largely dependent on the changes and changes of distant climates and foreign markets. At least a series of important meetings and conferences took place, mostly at Syracuse, New York, with Hon. Henry S. Randall, President of the National Association of Wool Growers, as leading manager on one side, and Mr. Hayes, representing the National Association of Wool Manufacturers, taking part and perhaps giving facts and advice. Both these gentlemen won the confidence of all, and their services were highly appreciated. The result was the wool tariff of 1867, which was undisturbed until 1883, but held advantages to both the wool and woollen industries, and helped greatly to put aside all old jealousies and bring in their place the mutual confidence and good will which is largely felt between the growers of wool and the makers of woollen fabrics who favor protective duties for both. These conferences made him well fitted.

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Mr. Hayes was a man of great energy and ability, and was well liked to meet with the Farmers' Club.

Mr. Heck liked to retell of his efforts to raise the wool tariff; he desired to get the full benefit of the meetings.

Mr. Curtis said much of his knowledge had been gained in farmers' meetings; though no class of people were so hard to interest in gatherings of this kind, but farmers ought to join in and feel interested. Farmers should have a knowledge of soils and of the value of fertilizers. Did they possess this, there would be less failure. A man need not wait to own a farm before taking an interest in a Farmers' Club.

Mr. Floate—By discussion we gain benefit in many ways. Often could thus learn the price which our produce should bring, and could buy and sell understandingly. He would not do away with a fair complement of "middlemen."

Mr. Dunning—Farm produce, as all very low. How could prices be bettered?

## The Horse.

## A SINGULAR DISCOVERY.

About two weeks since we saw a report in a country exchange, which we republished, that the trotting mare Gazelle, record 2:21, had died at Saugatuck, this State, and that she was owned by Stimson & Co., of that place. In the last issue of the Chicago *Horseman* we find the following article regarding this mare, which will show how careful a man must be when purchasing horses from unknown or irresponsible parties:

It is quite evident that Messrs. Stimson & Co. were made the victims of a gross deception when they purchased a mare alleged to be Gazelle 2:21. On Nov. 10th they wrote us on a postal card as follows:

SAUGATUCK, Mich., Nov. 11, 1887.

ED. HORSEMAN.—I have a horse, Gazelle, 2:21, by Hambletonian 10, died yesterday; cause, inflammation of the bowels and old age. We saw some time back inquiries in regard to her. She was sold in New York after making her record in Brooklyn for breeding purposes and brought west. We have a fine colt from her—a son of Bourbon Wilkes—five months old. Yours,

STIMSON & CO.

The card was handed over to the member of our staff who takes charge of the Track and Boulevard department, and the following paragraph appeared in the T. and B. columns in our issue of November 17.

Stimson & Co., Saugatuck, Mich., write us that on the 10th they lost by death, from inflammation of the bowels, at the age of twenty-two years, their bay brood mare Gazelle 2:21, by Hambletonian 10, dam Hattie Wood, by Corning's Harry Clay. Gazelle was sold in New York after making her record at Prospect Park, Brooklyn, N. Y., in 1872, and brought west. Stimson & Co. have her last foal, a fine colt, five months old, by Bourbon Wilkes.

Having occasion to glance at the P. & L. catalogue we noticed that Gazelle 2:21, was still alive and the property of that celebrated stock farm, and we at once wrote to Messrs. Stimson & Co. for an explanation. In the meantime the paragraph had attracted the eye of Mr. Chas. Backman of Stony Ford, who writes us as follows:

STONY FORD, N. Y., Nov. 21, 1887.

ED. HORSEMAN.—I noticed in your issue of Nov. 17th that Stimson & Co., of Saugatuck, Mich., lost their brood mare Gazelle, record 2:21, by Hambletonian 10, dam Hattie Wood, and that she was purchased just after making her record at Prospect Park, Brooklyn, in 1872.

There must be a mistake in regard to this mare, as Mr. Parker told me right after the race that he would not take \$30,000 for her. He afterwards bred her to Hambletonian Prince and Gov. Sprague, and sold her with her pedigree to Gov. Stanford of California for about \$12,000. You will find Gazelle in Gov. Stanford's catalogue for 1887, on page No. 116. Yours truly,

CHAS. B. BACKMAN.

On November 23, Messrs. Stimson & Co. send as their explanation, which sheds no light upon the matter, except the fact that they have undoubtedly been deceived. The letter speaks for itself:

SAUGATUCK, Mich., Nov. 23, 1887.

ED. HORSEMAN.—I understand that there was a letter received from you during my absence from town. Mr. S. opened and laid it away and it cannot be found. He informs me that you doubt the mare being Gazelle. I don't. I bought the mare three years ago, she was brought from the stock farm, and I had her pedigree but was lost in the burning of our buildings in July, 1886. She was bred as I mentioned in my postals.

□ To satisfy ourselves regard to the mare, after we purchased her we placed her in training. She was too old to let go a mile, but on a half mile track have sent her a quarter at 2:24 with urging except by voice. I will describe the mare as near as I can. She was a bay, 15½ hands high, black points, legs all black to above knees, rather long body, head legs well crooked under body at gambles, head and neck well set on body, cut up in throat like a thoroughbred, ears set high, tail set high, and a dimple in center of heart about two-thirds the size of a five-cent piece, was inclined to travel close, behind at slow jog, and in scoring would often start for a few steps on a pace. That is when at a jog. When at her speed she was as fast moving mare as ever walked, quick and sharp, clean as a dollar. There was one peculiarity about the mare. I always said she had a breast like a chicken, her breast bone was very prominent, but her chest was full and well developed. Her coat is as near like as a colt can be to a horse. We claim that the mare was as named; if we are in error we desire to know it.

Yours very truly, J. S. STIMSON & CO.

Mr. Backman's letter is conclusive, and the only astonishing thing is that Messrs. Stimson should have bought a mare purporting to be so celebrated, and that the mistake should not have been found out by them until after she was dead.

ED. HORSEMAN.—I am sorry to hear of this.

Horse Distemper among geldings.

A violent form of distemper has been prevailing in some parts of Kentucky during the past few months, and several breeders have lost many valuable animals from its effects. The stock under Mr. Conley's care has escaped. Some time since we mentioned in these columns that Mr. C. gave all his horse stock free access to salt in which a few wood ashes and a small quantity of pulverized copperas was mixed. We notice by a late issue of the Kentucky Stock Farm that some of the veterinary surgeons there recommend keeping in the feed boxes a mixture of equal parts of salt, sulphur, wood ashes and copperas, and also giving bran mashed frequently. It is probable that the constant use of the above mixture by Mr. Conley is the secret of his stock escaping the distemper. He also keeps a small piece of asphaltum in each watering trough. Another advantage of this treatment is that the animals will never be troubled with worms. Northern breeders can profit by Mr. Conley's example.

Mr. Conley's letter is as follows:

Dear Sirs:—I am sorry to tell you

that we have lost

the following horses:

Two geldings, 1½ years old,

one gelding, 2 years old,

one gelding

**Horticultural.****PEAR BLIGHT.**

BY J. C. ARTHUR.

No introductory description of the disease called pear blight (*Mycroccus amylopoaeus* Bur.) or fire blight, is needed in order to distinguish it or call it to mind. For nearly a century it has been the most prolific theme for discussion by horticultural writers and speakers among the whole range of plant maladies. Horticultural societies have talked themselves weary over it, and editors of horticultural periodicals have found it necessary to put a brake on the blight writers. The Western New York Horticultural Society several years ago passed a resolution that the subject should not be discussed in its meetings unless there were new facts and additional information to be given. The acting president of the American Pomological Society once cooled the ardor of discussion on this subject by observing: "I confess I have nothing to say except what pure speculation, and I have got tired of speculation and of hearing it on this subject."

One need not be at a loss to account for this perennial activity. The warm and repeated discussion which the subject has received is evidence in itself, and corroborates the fact that the disease is a serious evil, while the failure to reach conclusions that a majority can subscribe to shows how obscure and beyond ordinary scrutiny the cause lies, and how even to trace external changes in the course of the disease has taxed the full powers of observation. It was with some appreciation of the intricate nature of the problem that different societies at various times offered, or talked of offering, prizes for the discovery of the cause of the disease and of a remedy. They often contented themselves, however, with the appointment of a committee from their own number, with instructions to study up the matter and report at a subsequent meeting.

The cause of blight was finally discovered by Prof. T. J. Burrill, and additional verification worked out by the writer, need not be narrated here; it is much more to the point to state the results and practical deductions, and leave the steps by which they have been reached to be learned by reference to the original publications.

The cause of pear blight, as established by the last seven years of research, is connected with the activity of germs, and the malady belongs to the category of germ diseases, now definitely proven to occur both among animals and plants. The germs causing blight are of extreme tenacity; they are borne from place to place and from tree to tree by the atmosphere, which is never so quiet but that its movements are sufficient to keep such impalpable bodies afloat. Upon the germs finding entrance to the tissues of the plant the disease is set up in a more or less virulent form.

At the present time it is very well understood by all that bacterial germs are in the greatest abundance everywhere, and we may well inquire why all trees, at least all near trees, are not speedily exterminated.

The chief safeguard from such a calamity is the fact that but one specific kind of bacteria (named *Mycroccus amylopoaeus* Bur.) is able to penetrate the tissues of the pear tree, and in consequence all other bacteria, whatever may be their capacity for inciting disease in other plants or animals, are debarred and harmless so far as the pear tree is concerned. Why it is that this one kind can successfully overcome the forces in the tree and break down its structure is not definitely known, but it is usually accepted that the acidity of the plant juices, being in general unfavorable to bacterial development, but not affecting this species, is to be accounted one reason, although it may not be the principal one.

Knowing that but one kind of germ can set up the disease, it becomes evident that its discontinuous appearance in the same locality is explainable on the same grounds that govern epidemic diseases of animals. Spraying offers little hope of success than fumigation. The under surfaces of the flowers are so well protected by the stamens and other organs that the antiseptic used does no service. The growing shoots have their tenderest parts partially protected with the terminal cluster of leaves, and a fresh surface is continually forming which it would be hopeless to expect to keep fully disinfected. An experiment tried during last season in spraying with a solution of hyposulfite of soda, applied several times during the period of expansion of the buds, gave no evidence of beneficial effects.

The application of washes cannot, of course, be made to the flowers or growing shoots, but excellent results may reasonably be expected when made to the trunks and larger branches. Sufficient study has not yet been given to the matter to say what will prove the most effective application, but linseed oil has been advocated as forming an elastic coating, and it might be added some sulphur, and at least one per cent of carbolic acid. This would seem to answer every requirement for an antiseptic, and for the exclusion of atmospheric germs from the cracks in the bark. To decrease the amount of cracking the body of the tree may be shielded from the sun's fiercest rays by a low trimmed head, or by leaning the whole tree toward the southwest, or by boards, matting, or other protection on the sunny side of the trunks.

Among the indirect methods of fighting the disease none are more important than those which secure slow growth and early maturity of the shoots. This has been recognized from the first agitation of the subject, but until the present time there has been no unanimity of opinion as to the exact objects to be accomplished. From the preceding account it is apparent, however, that the chief aim should be to keep the amount of tender shoots at a minimum, in order to diminish the chances of penetration of germs, and to make the tissues as solid as possible, as the progress of the disease and the chances of its entire cessation are in inverse ratio to the succulence of the parts attacked.

The means for producing uniform growth and early maturity which have found favor from time to time are various, and their value for special cases are usually conditional. One of the most general applicable methods is to convert the orchard into permanent meadow after the third or fourth year from setting, to be treated with an

annual dressing of chemical fertilizers or a moderate application of stable manure. Experience shows that this method considerably reduces the percentage of blight while maintaining fruitfulness at nearly or quite the usual standard. The cultivation of some crop during the season, such as oats or buckwheat, is less effective. Restricting pruning as much as possible has some value. Root pruning has been warmly advocated, but is only advisable when there is strong probability of a severe attack of the disease, and is not applicable to all situations. Certain varieties, e.g., Duchess and Seckel, are less injured by the disease than others, and the selection of varieties in their relation to the disease is therefore to be borne in mind.

Another vulnerable point for the attack of blight is at the growing tips of the plant leaves, or at any point where there are developing buds. At such places the tissues, including the epidermis, are tender and filled with nutrient sap, while the outer surface of the organ is not yet cuticularized and rendered impervious. As the shoot ceases to elongate and approaches maturity the chances for infection become less and less. The early part of the season is consequently the most dangerous part, and allowing for the incubation period, during which the disease is inconspicuous, its strongest manifestation naturally falls in June and July. As the growth at the extremities is more vigorous or more protracted the possibility of infection are correspondingly increased, and a "growing season" is likely therefore to be a blight season. A connection between immaturity and blight has long been suspected, but explanations of the matter have hitherto been erroneous.

Besides the two vulnerable points already mentioned, there may now and then be another, brought out by cracking or other injury of the bark, and occurring on any part of the tree, but more commonly on the trunk. Through these cracks, however minute, the germs gain access to the interior of the tree, and the disease is started. The after progress is usually slow, on account of the solidity of the tissues, and progressing about equally in all directions, forms a patch of dead bark, which becomes dry and hard, often somewhat sunken, and usually separated from the living bark by a well-defined outline or crack. Such injury is commonly known as sun scald. Blight upon the trunks and larger limbs is also often contracted from small short spurts with a few leaves, which admit the germs at the time the spring growth is taking place.

**PREVENTIVES AND REMEDIES.**  
Whatever form pear blight assumes, it is started by germs gaining access to the tree in one of the three ways described—through the flowers, the growing shoots, or injuries of the bark. No method is known or has yet suggested itself of rendering the tree insusceptible to the disease, and a direct prevention must be sought in some means excluding the germs. There are three ways by which germinides may be applied to trees—by fumigation, by spraying, and by washing. The first method offers a possibility of at least partial success, and appears to be the only means by which one can hope to protect the trees.

The trials made so far have been with sulphur mixed with lime, and applied as a wash to the trunks. It is claimed by careful orchardists that the odor of the sulphur can be detected for weeks after treatment, and that it has proved satisfactory in warding off the disease. Whether more thorough and extended experiments will substantiate this conclusion, or show that the supposed immunity comes from other and accidental causes, there is no firm basis for an opinion.

Spraying offers little more hope of success than fumigation. The under surfaces of the flowers are so well protected by the stamens and other organs that the antiseptic used does no service. The growing shoots have their tenderest parts partially protected with the terminal cluster of leaves, and a fresh surface is continually forming which it would be hopeless to expect to keep fully disinfected. An experiment tried during last season in spraying with a solution of hyposulfite of soda, applied several times during the period of expansion of the buds, gave no evidence of beneficial effects.

The application of washes cannot, of course, be made to the flowers or growing shoots, but excellent results may reasonably be expected when made to the trunks and larger branches. Sufficient study has not yet been given to the matter to say what will prove the most effective application, but linseed oil has been advocated as forming an elastic coating, and it might be added some sulphur, and at least one per cent of carbolic acid. This would seem to answer every requirement for an antiseptic, and for the exclusion of atmospheric germs from the cracks in the bark. To decrease the amount of cracking the body of the tree may be shielded from the sun's fiercest rays by a low trimmed head, or by leaning the whole tree toward the southwest, or by boards, matting, or other protection on the sunny side of the trunks.

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**Cocoonuts.**

Cocoonuts are the fruit of the *Cocos nucifera*, or coconut palm tree, which grows abundantly in most tropical countries, it is from fifty to sixty feet in height, with a simple column-like stem being crowned with a beautiful plume of feathery leaves from twelve to fourteen feet long. The nuts grow in several long clusters depending from the base of the leaves; they are about the size of a man's head, the thin outer rind covering a large mass of fibres, which are used in many countries for the making of mats, cordage, and coarse sail-cloth. Within this fibrous coating is the shell of the nut, which is oval and very hard, and often serves for a drinking cup. The kernel is firm, white and pleasant; the interior hollow, and filled with sweet milky juice; when ripe, it is entirely filled with this juice. The coconut palm abounds in the East Indies, throughout the Pacific, and also in the West Indies and South America. On the Malabar and Coromandel coasts of India immense groves may be seen. In Ceylon, which is peculiarly well suited for their cultivation, it is estimated that twenty millions of these trees are growing. Here it stands at the head of all trees in its usefulness to man, every particle of stem, leaves and fruit being put to use, and the Cingalese love to repeat to strangers the hundred uses to which they apply it. The following are only a few of the countless uses of this invaluable tree: The leaves, for roofing, for mats, for baskets, torches or chafes, fuel, brooms, fodder for cattle, manure. The stem of the leaf, for fences, for pings (or yokes) for carrying burdens on the shoulders, for fishing rods, and innumerable domestic utensils. The cabbage, or cluster of unexpanded leaves, for pickles and preserves. The sap, for toddy, for distilling arrack, and for making vinegar and sugar. The unformed nut, for medicine and sweetmeats. The young nut and its milk, for drinking, for dessert; the green husk, for preserves. The nut, for eating, for curry, for milk, for cooking. The oil, for rheumatism, for anointing the hair, for soap, for candles; and the poonak, or refuse of the nut, after expressing the oil, for cattle and poultry. The shell of the nut, for drinking and serving glasses six to seven feet to admit of cultivation beneath. The finest apple trees I have ever seen were ten to fifteen feet to the first branch, pointing fifty feet heavenwards and capable of bearing 100 lbs of bushels of fruit. The first to give up the ghost with me were the lowest, and the best now have the largest trunks. Eternal vigilance and a sharp knife is the price of borer. I've washed, cut and probed for them until my pants' knees were worse worn than a Methodist preacher's. I've tried soft soap and find it succeeds better with some people than with worms. I've tried many mixed washes—the knife is the only cure. Once lodged under the bark nothing will remove them but a supple back, an iron will and a sharp knife."

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## MICHIGAN FARMER,

AND  
STATE JOURNAL OF AGRICULTURE.

## GIBBONS BROTHERS

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DETROIT, MONDAY, DECEMBER 5, 1887.

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## THE "HOUSEHOLD."

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## WHEAT.

The receipts of wheat in this market last week amounted to 113,064 bu., against 153,905 bu. the previous week, and 250,513 bu. for corresponding week in 1886. Shipments for the week were 52,935 bu. for against 102,102 bu. the previous week and 80,014 bu. the corresponding week in 1886. The stocks of wheat now held in this city amount to 796,065 bu., against 754,562 bu. last week and 1,780,342 bu. at the corresponding date in 1886. The visible supply of this grain on Nov. 26 was 30,361,799 bu. against 38,871,956 the previous week, and 59,572,075 for the corresponding week in 1886. This shows an increase from the amount reported the previous week of 459,533 bushels.

The past week has been an exciting one in the grain trade. Wheat was especially active, and displayed more buoyancy than at any time since the Chicago "corner" broke in June last. The advance on spot futures aggregated 2,913,000 bu. against 1,597,000 bu. the previous week. Chicago was firm and active on Saturday, with the advance then about the same as in Detroit. New York closed higher on Saturday than on the previous day, after considerable fluctuation in values.

The following table exhibits the daily closing prices of spot wheat in this market from Nov. 10th to Dec. 3d, inclusive:

No. 1	No. 2	No. 3	Wt.	Rate	Rate
10	81 1/2	81 1/2	75 1/2	75 1/2	75 1/2
11	80 1/2	77 1/2	75	75	75
12	81 1/2	77 1/2	75	75	75
13	81 1/2	77 1/2	75	75	75
14	81 1/2	77 1/2	75	75	75
15	81 1/2	79	77	77	77
16	81 1/2	80 1/2	75	75	75
17	81 1/2	80 1/2	75	75	75
18	81 1/2	80 1/2	75	75	75
19	81 1/2	80	75	75	75
20	81 1/2	81 1/2	75	75	75
21	81 1/2	81 1/2	75	75	75
22	81 1/2	81 1/2	75	75	75
23	81 1/2	81 1/2	75	75	75
24	81 1/2	81 1/2	75	75	75
25	81 1/2	81 1/2	75	75	75
26	81 1/2	81 1/2	75	75	75
27	81 1/2	81 1/2	75	75	75
28	81 1/2	81 1/2	75	75	75
29	81 1/2	81 1/2	75	75	75
30	81 1/2	82 1/2	75	75	75
31	81 1/2	82 1/2	75	75	75
Dec. 1	81 1/2	82 1/2	75	75	75
2	82	82	75	75	75
3	83	84	75	75	75

For No. 2 red the closing prices on the various deals each day of the past week were as follows:

Jan. Feb. May.

Monday..... 81 1/2 88 88

Tuesday..... 82 1/2 89 89

Wednesday... 82 1/2 84 1/2 89 89

Thursday.... 83 1/2 85 1/2 90 1/2

Friday..... 84 1/2 86 1/2 90 1/2

Saturday.... 85 1/2 87 1/2 91 1/2

The Minneapolis Market Record states that nearly 30,000,000 bu. of wheat received in this city and Duluth during the last three months is just about half the receipts at those points during the whole of the cereal year following the crop of 1886. And the surplus remaining in first hands does not appear to be any larger than that of a year ago. Some people think it considerably less. The Chicago Tribune commenting upon this says that this way of looking at the matter suggests the possibility of much better prices next summer if not now. Certainly if the old world should want very much more there would be room for a brushing out of bins in order to get enough for domestic and foreign consumption.

Undoubtedly the strongest argument in favor of the advance in values was the unexpected smallness of the increase in the "visible supply." King, of Toledo, had figured out an increase of a million and a half of bushels, whereas it did not amount to half a million. The receipts are decreasing at all points and we look for the decrease to continue for a time.

Reports from Russia say that at Taganrog, Nov. 19, the cold had become dangerously cold, threatening navigation. At Königsberg, Nov. 18, navigation was closed for sailors. The Odessa market, Nov. 19, was firm but quiet, exporters buying only to complete cargoes shipped from store. Rice and maize were scarce. Receipts of but-

ter are nothing to report.

The market remains quiet but steady, and there is nothing new to say in regard to the situation. Choice dairy grades continue scarce, and when they are to be had command prices somewhat above quotations.

The range of prices is 14@16¢ for medium

grades of dairy, 17@18¢ for choice, and 19@20¢ for extra selections.

Creamery is hardly

as firm as a week ago, and is quoted

quiet at 24@25¢ per lb.

The make of but-

ter continues large in this State, judging from receipts, which are fully up to the requirements of the trade except in the single instance of really fine samples of dairy. At Chicago the week closed with choice stock higher than a week ago. Buyers object to the extreme prices demanded for fancy brands of creamery, although all sweet makes of both dairy and creamery are readily disposed of when they can be purchased within 24@28¢. The shipping movement was fair, while local trade was quiet. Quotations were as follows: Fancy Elgin creamery, 29@30¢ per lb; fine Iowa, Wisconsin and Illinois do., 24@27¢; fair to good do., 17@22¢; low grades, 14@15¢; fancy dairies, 23@25¢; fair to good do., 16@20¢; ordinary do., 12@14¢; common and packing stock, 12@15¢; roll butter, 15@17¢; grease, 6@8¢. The New York market is in much the same condition as our own. Strictly fine goods are scarce and firm, while other grades are weak and irregular. The *Alv. Y. Daily Bulletin* says of the market:

"Shipments of wheat from India for the week ending Nov. 26, 1887, as per special cable to the New York Produce Exchange, aggregated 100,000 bu., of which 80,000 bu. were for the United Kingdom and 20,000 bu. to the Continent. The shipments for the previous week, as cabled, amounted to 380,000 bushels, of which 140,000 went to the United Kingdom and 200,000 bu. to the Continent. The total shipments from April 1, 1887, to November 26, 1887, have been 22,940,000, including 11,860,000 bushels to the United Kingdom, 11,050,000 to the Continent. The wheat on passage from India Nov. 15 was estimated at 1,832,000 bu. One year ago the quantity was 5,424,000 bushels.

The following table shows the quantity of wheat "in sight" at the dates named, in the United States, Canada, and on passage to Great Britain and the Continent of Europe:

Bushels	88-89	89-90	90-91	91-92	92-93
Passage for United Kingdom	1,832,000	5,424,000	22,940,000	11,860,000	11,050,000
On passage for Continent of Europe	1,464,000	1,464,000	1,464,000	1,464,000	1,464,000
Total bushels Nov. 19, 1887	5,296,000	6,888,000	24,404,000	13,324,000	12,514,000
Total previous week	5,095,887	5,095,887	24,404,000	13,324,000	12,514,000
Total two weeks ago	4,992,574	4,992,574	24,404,000	13,324,000	12,514,000
Total Nov. 20, 1887	5,087,351	5,087,351	24,404,000	13,324,000	12,514,000

The estimated receipts of foreign and home-grown wheat in the English markets during the week ending November 26 were 33,600 bu. less than the estimated consumption; and for the eight weeks ending Nov. 12 the receipts are estimated to have been 1,150,000 bu. more than the consumption. The receipts show an increase of 2,081,528 bu., as compared with the corresponding eight weeks in 1886.

The L. woolstock market on Saturday was quoted in, with fair demand. Quotations for American wheat are as follows: No. 2 winter, 6@8¢ per cental; No. 2 spring, 6s. 9d.; Club, 6s. 10d.

## CORN AND OATS.

CORN.

Quotations in that market on Saturday were as follows:

EASTERN STOCK	
Creamery, State, prime	30 2/25
Creamery, State, tubs	30 2/25
Creamery, Penn., fancy	30 3/31
Creamery, Penn., choice	30 3/31
Creamery, Western, fancy	29 2/28
Creamery, prime	25 2/28
Creamery, good	25 2/28
Creamery, tubs	17 2/22
Creamery, Western, June	17 2/22
State dairy tubs, fancy	35 2/27
State dairy tubs, choice	35 2/27
State dairy tubs, fair	30 2/26
State dairy tubs, ordinary	17 2/18
State dairy, Welsh, tubs, prime	22 2/23
State dairy, Welsh, tubs, fair	20 2/20
State dairy, prime, fair to good	30 2/23
State dairy, prime, good to prime	30 2/23
State dairy, prime, fair to good	30 2/23
State dairy, prime, good to prime	30 2/23
Western Creamery, fancy	23 2/21
Western imitation creamery, choice	22 2/21
Western do., good to prime	19 2/21
Western do., ordinary	15 2/16
Western do., choice	15 2/16
Western do., prime	16 2/18
Western dairy, ordinary	14 2/15
Western factory, fancy	22 2/21
Western factory, current, prime	19 2/21
Western factory, ordinary	14 2/16

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<tbl





## FROWNS AND TEARS.

before the days of clock in hall,  
Or watch in pocket or on nail,  
The ancients told us of the day  
By measurements of sun and shade,  
And you do, you forward jade,  
Who can be everything but gay,  
They set up in a public place,  
Whereon a figure, like your nose,  
Wrote your threatening finger, rose;  
And, when the sun went up and down,  
Painted the hours, as you do now,  
With sullen humors on y'ur brow,  
For every hour a different frown!

Then the sun set, or hid his light  
In cloudy days, and in the night,  
You told the time another way,  
Water, which from vessels dropped,  
Till they were emptied, when it stopped:  
And this they called the clepsydra,  
You use the same old measure yet,  
For evermore your eyes are wet,  
You leaky creature, old and sour,  
Whose life is a perpetual shower!  
Strong should he be, and in his prime,  
To whom, as wife, you measure time,  
How he tell, with you in sight,  
Whether it be the day or night,  
Your peevish tempers change so soon;  
Your frown, as now, proclaims it noon,  
And now 'tis midnight—by your tears!

—*San Francisco Examiner.*

## PET BURGLAR ALARMS.

"I do not train dogs to watch for burglars," said a fancier, "but some of them are well bred to do it by their natural sagacity and force of character. They may not perform the duty with the desperate energy that is shown by the white swan down with the long tail and the black swan over his eyes, but they will do it! enough to answer every reasonable expectation." That bull terrier you see there now, weighing about thirty-five pounds, with the undershot jaw and ugly enough to be put in a chamber of horrors anywhere, might be awake when a robber is squeezing his body through the pantry window, but he could make no effort to stop the man's entry; but once in the fellow would have hard work to get out again."

"It is not easy to say what the bull terrier will do with the prisoner when he had him at his mercy. It depends largely upon the animal's previous general (not special) training. Certainly the man will have no use in the matter, unless he howls to the inmates of the house for protection, which really the wisest course he could take, though he seldom chooses it. A personal encounter hand to tooth would be a farce indeed, and the possession of a pistol gives fewer advantages than you might think. The drawing of the weapon would precipitate the conflict! The bull terrier is quite hard to kill, and a mere wound only adds to its ferocity. Then the combatants are too close together to allow of the effect of a revolver, and a 'thrust' grip' with the dog may get at once, and is almost sure to secure in a few seconds, will quickly place the robber where a pistol, which it would probably be discharged before the trigger was pulled, will do him no good.

## A Boy on a Farm.

"It is my impression that a farm without a boy would very soon come to grief. What a boy does is the life of the farm. He is the factotum, always in demand, and always expected to do the thousand and one things that nobody else will do. Upon him falls the odds and ends, the most difficult things. After everybody else is through he is to finish up. His work is like a woman's—perpetually waiting on others. Everybody knows how much easier it is to cook a good dinner than to wash the dishes afterwards. Consider what a boy on a farm is required to do—things that must be done, or life would actually stop. It is understood, in the first place, that he is to do all the errands, to go to the store, to the post-office, and to carry all sorts of messages. If he had as many legs as the centipede, who would tire before night. He is the one who spreads the grass as the men cut it; he stows it away in the barn; he rides the horse to cultivate the corn up and down the hot, weary rows; he picks up the potatoes when they are dug; he brings wood and water and splits kindling; he gets up the horse and turns out the horse. Whether he is in the house or out of the house, there is always something to do. Just before school in the winter he shovels paths; in the summer he turns the grindstone. And yet, with his mind full of schemes of what he would like to do, and his hands full of occupation, he is an idle boy who has nothing to busy himself with schools and chores. He would gladly do all the work if somebody else would do all the chores, he thinks; and yet, I doubt if any boy ever amounted to anything in the world, or was of much use as a man who did not enjoy the advantages of a liberal education in the way of chores.—Charles Dudley Warner.

## Why We Look Bored.

The dog is not going to disturb us fully. He is a sentinel who can watch without making everybody else watch, too. Right, he thinks, will be quite time enough for those to whom he owes allegiance to inquire into the merits of the case, and a ready serious question that arises is: Will burglar be able to take his proper place in the investigation? Or, in other words, turning to the original proposition, What the hell terrier going to do with him?

I know of three cases in which distinct answers were given to that question.

A clever young North Side matron, who has essayed to shine upon the amateur stage, declared it her belief that the majority of girls were not equal to the task of entertaining the other sex, and hence held that other things might be substituted for conversation, like musicals, charades and private theatricals where no great amount of natural brilliancy is required.

A well-known belle with Titian hair, who does not act, answered very promptly that last winter society people had a number of chances of attending private theatricals, but the men either would not go at all or if they did declared them too stupid for anything, and stood in rows in the back parts so as to be able to stroll out when they became tired: "and," continued the young woman in question, "everybody knows that to get a man inside of a room where he knows he is to hear a violin and piano is simply an impossibility."

Another woman, young and unmarried, announced with great fervor and with a pained look that she was sure it was the club; that club life ruined a man, made him hate to change his coat and get himself up in the style necessary to appear in the world of fashion, and if once there he was sure to wish himself back at the club with his easy chair and a cigar.

Then I knew an old lawyer who was passed before daybreak by roars of help-hall, and going down stairs found a bull sitting on a marble top table, and a red-eyed bull terrier, that a friend of mine gave him as a fee for defending a law suit, gazing at him from the floor. And, again, I once sold a fine bull to an elderly lady, who, distrusting me and living all alone in her house, she never remembered such a protector. Coming down to light the fire one morning, she hurried to find her dog grimly watching upon the clay beneath the window. He warned his master in order to prevent his son from falling upon himself, but he had taken the bull terrier into his calculus.

Then I knew an old lawyer who was passed before daybreak by roars of help-hall, and going down stairs found a bull sitting on a marble top table, and a red-eyed bull terrier, that a friend of mine gave him as a fee for defending a law suit, gazing at him from the floor.

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OUR AGRICULTURAL RESOURCES.  
Annual Report of the Commissioner of Agriculture.

## Commercial.

## DETROIT WHOLESALE MARKET.

DETROIT, December 5, 1887.

**FOUL.**—Market unchanged but very firm under the influence of the improvement in wheat. If values of wheat hold up an advance in flour will be a necessity. Quotations on car lots are as follows:

Michigan roller process.....	3 50	25
Flour.....	4 00	25
Mesona, bakers.....	4 10	64 15
Mesona, patents.....	4 50	65
Rye.....	3 30	45
Low grades.....	2 15	30

**WHEAT.**—After a firm and active market all week, with the situation favoring sellers, and values advancing slightly each day, the market on Saturday opened weak and fluctuating, and prices declined a fraction. Later this was regained, and in the case of futures values were slightly higher at the close. New York and Chicago were also higher on Saturday than on Friday. Liverpool and London are higher than a week ago, and firm at the advance. Closing prices on Saturday were as follows: Spot—No. 1 white, \$5; No. 2 red, \$4 50; No. 3 red, 77c. Futures—No. 2 red, December, \$5; May, 91 1/2c; No. 1 white, May, delivery, 91 1/2c.

The work of the bureau of animal industry has been greatly extended during the past year. The governors of thirty-one states and territories have accepted the rules and regulations of the bureau and promised the assistance of local officers to secure their enforcement. In addition the legislatures of Rhode Island, Virginia, New York and Illinois have enacted laws providing for co-operation.

The worst infected counties, and those where there was most danger of the disease, are those in the neighborhood of New York, Chicago and Baltimore. They have been placed in quarantine. Since the beginning of the work for the eradication of this disease in August, 1880, to Oct. 31, 1887, the inspectors of this bureau have inspected 15,387 herds, containing 117,480 animals, in districts where the plague was supposed to exist. Among these there were 798 infected herds, containing 10,766 animals, of which 2,235 were affected with pleuro-pneumonia. These figures do not include 2,873 head of cattle in the distillery steeds of Chicago, nearly half of which are diseased. The Commissioner expresses regret at the unavoidable loss inflicted on the farmers of Illinois by the cattle quarantine, and adds: "There has not been a time in years when this malady has been confined to such restricted areas as at present, and consequently the conditions are very favorable for its complete eradication."

In regard to the department's experiments in silk-reeling, the Commissioner says the experiments have not yet reached the point of paying their own expenses, but was hard to be hoped for with a plant so limited.

The report recommends that the public printer be authorized to furnish to the agricultural press of the country, at the mere cost of labor and material, electrolytographs of such illustrations of the department as the editors may desire.

The Commissioner says the building of reservoirs among the Rocky Mountains for the storage of an immense volume of water now wasted should command the early attention of Congress.

**Veterinary Department**

Conducted by Prof. Robert Jennings, Veterinary Surgeon. Professional advice through the columns of the Michigan Farmer to all subscribers free. The full name and address will be necessary to identify them as subscribers. The symptoms should be carefully described to enable the author to give a correct diagnosis. No question unanswered. Correspondence by mail unless accompanied by a fee of one dollar. Private address, No. 201 First St., Detroit, Mich.

No Diagnosis.

INGHAM CO., Nov. 22, 1887.

Veterinary Editor of the Michigan Farmer.

I have a six year old rooster that by hard driving and negligence has become too sore. After standing still a few days he will travel free and easy for a few hours, then hitches and grinds, walks a little stiff at times. At times there is fever in his feet and the hoof has a tendency to swell. Has a good frog. Am keeping him in a ground floor stable and hoof is growing fast. Now as a subscriber of the FARMER I wish to know what best to do for him? If you wish more information concerning him, will be glad to furnish it.

A SUBSCRIBER.

Answer.—Subscribers of the FARMER, when asking advice through our Veterinary column, would consult their own interest by carefully describing all noticeable symptoms of disease in their animals, sick or lame, no matter how trifling they appear; the general condition of the animal, etc. By so doing it enables us to diagnose the disease with more certainty, and to give advice to the enquirer more satisfactorily. From the imperfect description of symptoms we are unable to advise you understandingly. If you will answer the following questions we will try to set you on the right road to repair, or partially repair, the injury done the animal: Has the horse been foun- dered? Was his site and dam sound in their feet? Was the horse driven without shoes? Are his feet round, flat, concave, pumice or contracted? Is he otherwise sound?

Lenorhina in a Mare.

FARMERS' CREEK, Nov. 30, 1887. Veterinary Editor of the Michigan Farmer. I have a mare that had the whites for about six years. I have treated her for it and at times thought I had it under control. It has become a bad case. Can you prescribe a remedy for it?

J. W. TOWER.

Answer.—The chronic character of the disease in this case makes a cure extremely doubtful. Diseases of this class more particularly require early and prompt attention to effect a permanent cure. Treatment—Wash out the parts with tepid water, using a syringe for the purpose, then inject the following: half an ounce of sulphate of zinc dissolved in one pint soft water; add four ounces of glycerine; shake well together and use with a syringe once a day. Give internally one of the following powders once a day in the feed, or mix with syrup to a paste, and smear on the tongue, using a wooden paddle for the purpose: Sulphate of iron, pulverized, one ounce; Gentian root, pulverized, two ounces; Jamaica ginger root, pulverized, one ounce. Mix well together and divide into eight powder. Discontinue the powders for a week, then renew them as before.

## LIVE STOCK MARKETS.

The Michigan Central Yards.

Saturday, Dec. 3, 1887.

CATTLE.

The receipts of cattle at these yards numbered 738 head, against 526 last week. There was a fair attendance of buyers, but the quality of the stock offered was of poor quality, and this made the market a little slow.

The run of western cattle was light and this had the effect of sustaining prices, which averaged about the same as those of last week. The following were the closing QUOTATIONS:

Extra graded steers, weighing 1,300 to 1,450 lbs.....	\$4 00	25
Choice steers, fine, fat, and well formed, 1,300 to 1,450 lbs.....	3 50	25
Good steers, well fattened, weighing 950 to 1,100 lbs.....	3 00	24
Common steers, stock—Fair cows, heifers and light steers.....	3 00	23
Coarse mixed butchers' stock—Light thin cows, heifers and bulls.....	2 00	22

C. Roe sold John Robinson a mixed lot of 24 head of fair butchers' stock av 850 lbs at \$2 90; 24 lbs at \$2 65; a bull weighing 1,120 lbs at \$2 25 and one weighing 700 lbs at \$2 50.

H. Muller sold Voigt a mixed lot of 14 head of fair butchers' stock av 800 lbs at \$2 70.

Purdy sold Kelly 23 mixed westerns at \$1 00; 20 lbs at \$2 15 and 22 to Caplis av 1,000 lbs at \$2 50.

Webb sold Murphy 5 thin heifers av 650 lbs at \$2 60.

McHugh sold Brooks 10 stockers av 775 lbs at \$2 50.

Guthrie sold Ordens 4 fair butchers' steers at 900 lbs at \$3 10.

McFarlan sold J. Wreford 3 fair butchers' steers at 1,036 lbs at \$3 25.

Sullivan & F sold Kelly 23 mixed westerns at \$1 00; 20 lbs at \$2 15 and 22 to Caplis av 1,000 lbs at \$2 50.

Webb sold Murphy 5 thin heifers av 650 lbs at \$2 60.

McHugh sold Brooks 10 stockers av 775 lbs at \$2 50.

Fenton sold John Robinson a mixed lot of 25 head of thin butchers' stock av 930 lbs at \$2 55.

McMullen sold John Robinson 2 bulls av 1,085 lbs at \$2 25.

Taylor sold Burt Spencer 5 stockers av 864 lbs at \$2 50.

Watson sold Brooks 6 stockers av 683 lbs at \$2 50; a cow weighing 1,000 lbs at \$2 25 and a bull weighing 800 lbs at \$2 50.

Mosher sold Brooks 9 stockers av 623 lbs at \$2 50.

McMullen sold Sullivan & F 2 fair butchers' steers at 944 lbs at \$3 10.

Stevens sold John Robinson a mixed lot of 13 head of fair butchers' stock av 954 lbs at \$2 10; 10 fair cows at \$2 25 and a bull to McDevitt weighing 1,230 lbs at \$2 75; a bull to McDonald weighing 900 lbs at \$2 50 and a good cow to Caplis weighing 1,150 lbs at \$2 40.

Brown sold John Robinson a mixed lot of 24 head of thin butchers' stock av 840 lbs at \$2 50.

Lewis sold McDonald 5 stockers av 716 lbs at \$2 50.

Stevens sold McFarlan a mixed lot of 8 head of thin butchers' stock av 860 lbs at \$2 40.

Patrick sold H. Roe a mixed lot of 10 head of thin butchers' stock av 818 lbs at \$2 75.

Spokane sold Burt Spencer 5 stockers av 838 lbs at \$2 50.

McMullen sold Burt Spencer 5 stockers av 840 lbs at \$2 50.

Ingersoll sold Hogan a mixed lot of 8 head of thin butchers' stock av 860 lbs at \$2 40.

Stevens sold John Robinson a mixed lot of 11 head of fair butchers' stock av 849 lbs at \$2 50.

Wreford & Beck sold Phillips & Wreford 36 mixed westerns at \$1 00; 20 lbs at \$2 50 and 30 to Los Angeles at \$2 50.

Fleischman sold McGee 24 mixed westerns at 789 lbs at \$2 25.

Spieler sold Burt Spencer a mixed lot of 22 head of fair butchers' stock av 863 lbs at \$2 50.

Vandusen sold Kommand a mixed lot of 7 head of thin butchers' stock av 745 lbs at \$2 55.

McMullen sold Sullivan & F a mixed lot of 14 head of fair butchers' stock av 854 lbs at \$2 50.

Judson sold Caplin a mixed lot of 5 head of thin butchers' stock av 918 lbs at \$2 50.

Stevens sold John Robinson a mixed lot of 13 head of fair butchers' stock av 815 lbs at \$2 50.

Stevens sold Caplin a mixed lot of 4 head of thin butchers' stock av 745 lbs at \$2 55.

McMullen sold Sullivan & F a mixed lot of 14 head of fair butchers' stock av 854 lbs at \$2 50.

Judson sold Caplin a mixed lot of 5 head of thin butchers' stock av 860 lbs at \$2 50.

Stevens sold Caplin a mixed lot of 4 head of thin butchers' stock av 745 lbs at \$2 55.

McMullen sold Burt Spencer 5 stockers av 838 lbs at \$2 50.

Stevens sold Caplin a mixed lot of 4 head of thin butchers' stock av 745 lbs at \$2 55.

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